

**METHOD AND APPARATUS FOR FRACTIONAL-N SYNTHESIS****ABSTRACT OF THE DISCLOSURE**

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A method and apparatus for fractional-N synthesis includes processing that begins by generating a 1<sup>st</sup> feedback frequency from the output frequency based on a fixed divider value. The processing continues by generating a 2<sup>nd</sup> feedback frequency from the output frequency based on a selectable divider value, a modified fractional value of the divider value, and a modified integer value of the divider value. The processing continues by determining whether the fractional value of the divider value is within a range of fractional values. If so, the 1<sup>st</sup> feedback frequency is used to produce the output. If the fractional portion of the divider value is not within the range of fractional values, the 2<sup>nd</sup> feedback frequency is used to produce the output frequency.

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